

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings and versions of claims in the application. The listing of claims below shows revisions with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Listing of Claims

1. (Currently Amended) An illuminator system for a ~~flat-panel~~ display, comprising:
 - a slab waveguide disposed behind a back face of the display, wherein the slab waveguide is linearly tapered along a Y-axis first-axis of the back face of the display, and wherein the slab waveguide is substantially co-extensive with the back face of the display across the Y-axis first-axis and across an X-axis second-axis of the back face of the display, wherein the Y-axis and the X-axis are perpendicular to each other, and wherein the slab waveguide comprises comprising a thick end and an opposing thin end that are each substantially parallel to the X-axis;
 - a triangular with an input linear wedge that is a part of and that protrudes protruding directly from the thick end of the slab waveguide;
 - an input face of the triangular input wedge that is substantially co-extensive with the back face of the display along the X-axis;
 - a plurality of light sources each configured to inject light into the input linear wedge of the waveguide, wherein the injected light emerges over a face of the waveguide
 - a plurality of N light arrays wherein each light array is configured to provide light that is substantially co-extensive with the back face of the display along the X-axis;

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a linear taper of the input face of the triangular input wedge that, in combination with an angle relative to the input wedge of incoming light from an I^{th} light array of the plurality of N light arrays, is configured to direct the incoming light from the I^{th} light array to emerge from a face of the slab waveguide over only an I^{th} portion of N portions of the back face of the display, wherein each of the N portions is substantially co-extensive with the back face of the display along the X-axis, and wherein each of the N portions are a different portion of the back face of the display than any other of the N portions;

an illuminator system controller configured to synchronize with a controller of the display wherein the illuminator system controller turns off a previously turned-on light array of the plurality of N light arrays and turns on the I^{th} light array of the plurality of N light arrays in response to the controller of the display writing to a corresponding I^{th} portion of N corresponding portions of the display, and wherein the display is a liquid crystal flat-panel display.

2. (Currently Amended) An illuminator system according to claim 1, in which each of the plurality of N light arrays is substantially co-extensive with the back face of the display along the X-axis ~~light sources comprises a linear array of light sources configured to illuminate the input linear wedge of the waveguide.~~

3. (Currently Amended) An illuminator system according to claim 1, further comprising a cylindrical mirror configured to collimate from the plurality of N light arrays ~~the injected light~~ into the input face of the triangular input linear ~~wedge of the slab~~ waveguide.

4-5. (Canceled)

6. (Currently Amended) An illuminator system according to claim 1, further comprising a prismatic film configured to guide the directed ~~injected~~ light emerging ~~from over~~ the face of the slab waveguide normal to the face of the slab waveguide.
7. (Canceled)
8. (Previously Presented) A display according to claim 1, in which the flat-panel display is a liquid-crystal display.
9. (Canceled) ~~A display according to claim 2, wherein a scanning addressing circuit is configured to synchronize with the row addressing circuit of the display, the scanning addressing circuit further configured to scan the injected light into the input linear wedge wherein corresponding areas of the display are illuminated in turn.~~
10. (Canceled)
11. (Currently Amended) An illuminator system according to claim 1, wherein the slab waveguide is optically linearly tapered via variation in refractive index.
12. (Currently Amended) A method for illuminating a flat-panel display, comprising:
injecting light from a plurality of N light arrays ~~a light source of a plurality of light sources~~ into an input linear wedge of a slab waveguide that is disposed behind a back face of the display, wherein the slab waveguide is linearly tapered along a Y-axis ~~first axis of the back face of the display,~~ and wherein the slab waveguide is substantially co-extensive with the back face of the display across the Y-axis ~~first axis~~ and across an

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X-axis second axis of the back face of the display wherein the Y-axis and the X-axis are perpendicular to each other, and wherein the slab waveguide comprises comprising a thick end and an opposing thin end that are each substantially parallel to the X-axis, and wherein with the input linear wedge is a part of and protrudes protruding directly from the thick end of the slab wave guide, and wherein each light array of the plurality of N light arrays provides light that is substantially co-extensive with the back face of the display along the X-axis wherein the injected light emerges over a face of the waveguide based on the injection angle of the light source; and

scanning the injected light into the input linear wedge resulting in different areas of the display being illuminated in turn

wherein the injecting light comprises turning off a previously turned-on light array of the plurality of N light arrays and turning on an I^{th} light array of the plurality of N light arrays in response to writing to a corresponding I^{th} portion of N portions of the display, wherein an input face of the input linear wedge is substantially co-extensive with the back face of the display along the second axis and substantially parallel to the X-axis, and wherein a linear taper of the input face of the input linear wedge, in combination with an angle relative to the input wedge of the I^{th} light array of the plurality of N light arrays, directs incoming light from the I^{th} light array to emerge from a face of the slab waveguide over only an I^{th} portion of N portions of the back face of the display, and wherein each of the N portions of the back face of the display is substantially co-extensive with the back face of the display along the X-axis, and wherein each of the N portions of the back face of the display are a different portion of the back face of the display than any other of the N portions of the back face of the display, and wherein the display is a liquid crystal flat-panel display.

13. (Currently Amended) A method according to claim 12, wherein each of the plurality of N light arrays is substantially co-extensive with the back face of the display along the X-axis ~~light sources comprises a linear array of light sources configured to illuminate the input linear wedge of the waveguide.~~

14. (Currently Amended) A method according to claim 12, wherein injected light from the plurality of N light arrays ~~light sources~~ is collimated into the input linear wedge of the waveguide by a cylindrical mirror.

15-16. (Canceled)

17. (Currently Amended) A method according to claim 12, further comprising guiding the injected light emerging from ~~over~~ the face of the slab waveguide normal to the face of the slab waveguide.

18-19. (Canceled)